

ABSTRACT

An optical device for determining the presence of a first nucleic acid in a sample comprising a second  
5 nucleic acid complementary to the first nucleic acid and  
able to hybridize with the first nucleic acid under  
hybridizing conditions, the second nucleic acid being  
bonded to a solid support, wherein the solid support is  
formed as a light reflecting surface having a first  
10 thickness when bonded to the second nucleic acid, and  
wherein the light reflecting surface has a second  
thickness, wherein the first and second nucleic acids are  
hybridized, and the first and second thicknesses can be  
distinguished by their effect on the light reflecting  
15 properties of said light reflecting surface independent of  
any label present on the first nucleic acid.